



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,516	08/14/2001	Yukio Yamada	106938.01	8359

25944 7590 04/24/2003

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

PURVIS, SUE A

ART UNIT	PAPER NUMBER
----------	--------------

1734

DATE MAILED: 04/24/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/928,516

Applicant(s)

YAMADA, YUKIO

Examiner

Sue A. Purvis

Art Unit

1734

The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/631,282.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 9-18 have been renumbered 1-10.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 1 claims "a compression bonding head..." and "a press head..." Based upon the examiners reading of the disclosure, it is unclear whether the applicant wishes to treat these two "heads" as in fact the same thing or not. The claim is further misleading by stating "a pressing chip...and said semiconductor device are held respectively." This suggests that the applicant is trying to claim the embodiment where the "compression bonding head" and "press head" are the

Art Unit: 1734

same and hold the “pressing chip” and the “semiconductor chip” respectively. If the applicant wants to reword the claim and clearly state these are separate “heads”, then the applicant needs to point out clear support in the specification for this. For examination purposes, the examiner has followed the embodiments in the specification and treated the “compression bonding head” and the “press head” as the same thing.

5. Regarding claim 2, the language “serving both as said press head” is not definite as required by §112. The applicant appears to be trying to claim that the “compression bonding head” also serves as the “press head” and the examiner has assumed as such for examination purposes. Claim 1 is not clear as having claimed two separate as discussed above.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamanaka (US Patent No. 5,662,763).

Yamanaka discloses a mounting apparatus with a collet (11) which acts as the applicant's compression bonding head and is movable relative to a surface. The collet (11) includes means for holding the chip (1) thereon. (Col. 4, lines 15-24; Col. 5, lines 12-27.)

Regarding claim 2, as noted above, the applicant's own specification only allows for the “bonding head” to serve also as the “press head”. Thus, Yamanaka meets this claim limitation.

Art Unit: 1734

Regarding claim 3, the holding means in Yamanaka is capable of holding a semiconductor chip (1) as well as a second chip. The language of this claims amounts to functional language as discussed below.

Regarding claims 6 through 8, the claim also contains functional language describing the process step when the pressing chip of applicant's invention is used.

Applicant should note that the language after "whereby" in line 5 of claim 1, is considered to be functional language by the examiner, thus the language does not impart any structural limitations to the claims. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). "[A]pparatus claims cover what a device *is*, not what a device *does*." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). (See MPEP §2114.) As written, the applicant has not included the "pressing chip" as a portion of the apparatus, rather it is considered to be used by the apparatus as understood by the examiner. As the claim is written, Yamanaka is capable of performing the function of the applicant's application.

During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d

Art Unit: 1734

1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). (See MPEP §2111.)

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato (US Patent No. 5,985,064).

Sato discloses a chip compression bonding apparatus which includes a holding block (2) including a nozzle (3). The holding block (2) includes suction passages (2b) and allows the nozzle (3) to be releasably held thereon. The nozzle (3) also includes a suction port (3a) which allows the chip (1) to be held on the nozzle surface. (Col. 3, lines 1-17.)

Regarding claim 2, as noted above, the applicant's own specification only allows for the "bonding head" to serve also as the "press head". Thus, Sato meets this claim limitation.

Art Unit: 1734

Regarding claim 3, the holding block (2) in Sato holds the nozzle by suction and is also capable of holding a semiconductor chip (1) or a second chip. The language of this claims amounts to functional language as discussed above.

Regarding claim 4, the nozzle includes a suction hole (3a) and the holding block (2) also includes suction ports (2b).

Regarding claim 5, the holding block (2) includes plural suction ports (2b) and while these are designed to hold the nozzle (3) thereon, the applicant is reminded the apparatus must be different in terms of structure rather than function. The holding block (2) would be capable of holding the chips.

Regarding claims 6 through 10, these claims also contains functional language describing the process step when the pressing chip of applicant's invention is used.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Listed on attached PTO-892.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue A. Purvis whose telephone number is 703-305-0507. The examiner can normally be reached on Monday through Thursday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rick Crispino can be reached on 703-308-3853. The fax phone numbers for the

Art Unit: 1734

organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-1495.



Sue A. Purvis
Examiner
Art Unit 1734

sp
April 21, 2003